

What is claimed is:

1. An enlarged digital image providing method using data communication networks, the method for providing a digital
5 image from a server to a client via digital networks and providing an enlarged digital image relative to a designated domain as a client viewing a displayed image designates a specific domain of the displayed image for request of enlarged display, the method comprising the steps of:

creating an original digital image document (Level = N)
via shooting an object;

serially creating at least one reduced image document
(Level = N - 1 ~ Level = 1) having a resolution lower than the
original digital image document based on the original digital
15 image document;

creatively dividing the serially created reduced image documents and the original digital image document into a multiplicity of segmental image documents;

storing in a storage at server side each of the
20 multiplicity of the segmentally divided created image documents, reduced level information for indicating reduced image level and position information (X, Y) for indicating positions of entire image document before division;

providing as an initial display image a reduced image
25 document (Level = 1) of final level out of the reduced image documents in response to request by a client for image display;

receiving a request when a client designates a specific domain of a display image ($\text{Level} = r$, $1 \leq r \leq N - 1$) currently displayed on a display window as a requested enlarged domain and requests transmission of enlarged image ($\text{Level} = r + 1$) for enlarged display of the domain; and

transmitting from server side to client side at least one segmental image document ($\text{Level} = r + 1$) necessary for constructing an image of requested enlarged domain in response to contents of received request to prompt the transmitted segmental image document to be combined for implementation of displayed image.

2. The method as defined in claim 1, further comprising the steps of:

receiving contents of a request when a client indicates a moved display domain to request a moved display for moving a domain currently displayed on a display window while an enlarged image ($\text{Level} = r'$, $2 \leq r \leq n$) is being viewed, and

transmitting from server side to client side at least one segmental image document ($\text{Level} = r'$) necessary for structuring an image of designated moved display domain based on the received request of contents, and enabling the selected segmental image document to be additionally provided from storage to client side via communication means, thereby to allow a priorly transmitted segmental image document to be combined with an additionally transmitted segmental image document for constitution of an image of moved display domain.

3. The method as defined in claim 1, wherein segmental image documents created by dividing the sequentially reducibly created image documents are respectively of the same size at all levels.

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4. The method as defined in claim 2, wherein segmental image documents created by dividing the sequentially reducibly created image documents are respectively of the same size at all levels.

5. The method as defined in claim 1, wherein the original digital image documents and reduced image documents (Level = 1 ~ N) are provided as one group of image document style to be sequentially and alternatively displayed when a client views same.

6. The method as defined in claim 2, wherein the original digital image documents and reduced image documents (Level = 1 ~ N) are provided as one group of image document style to be sequentially and alternatively displayed when a client views same.

7. The method as defined in claim 1, wherein the original digital image documents and reduced image documents (Level = 1 ~ N) are created by dividing the multiplicity of image documents obtained by panoramic photographing according to segmental image documents and then combining same mosaically.

8. The method as defined in claim 2, wherein the original digital image documents and reduced image documents (Level = 1 ~ N) are created by dividing the multiplicity of image documents obtained by panoramic photographing according to segmental image documents and then combining same mosaically.

9. An enlarged digital image providing apparatus using data communication networks, the apparatus for providing a digital image from a server to a client via digital networks and providing an enlarged digital image relative to a designated domain as a client viewing a displayed image designates a specific domain of the displayed image for request of enlarged display, the apparatus comprising:

means for serially creating at least one reduced image document (Level = N - 1 ~ Level = 1) having a resolution lower than the original digital image document based on an original digital image document (Level = N) created via shooting an object;

means for creatively dividing the serially created reduced image documents and the original digital image document into a multiplicity of segmental image documents;

means for storing in a storage at server side each of the multiplicity of the segmentally divided created image documents, reduced level information for indicating reduced image level and position information (X, Y) for indicating positions of entire image document before division;

communication means for communicating with client via

data communication networks to receive client request and to respond thereto; and

image transmission control means for receiving a request when a client designates a specific domain of a display image (Level = r , $1 \leq r \leq N - 1$) currently displayed on a display window as a requested enlarged domain and requests transmission of enlarged image (Level = $r + 1$) for enlarged display of the domain to select a segmental image document (Level = $r + 1$) necessary for constituting an image for requested enlarged domain and to allow the selected segmental image document to be provided to client side from the storage through the communication means, thereby combining the transmitted segmental image document to enable to constitute a display image.

10. The apparatus as defined in claim 9, wherein the image transmitting control means receives contents of a request when a client indicates a moved display domain to request a moved display for moving a domain currently displayed on a display window while an enlarged image (Level = r' , $2 \leq r \leq n$) is being viewed, and selecting at least one segmental image document (Level = r') necessary for structuring an image of designated moved display domain based on the received request of contents, and enabling the selected segmental image document to be additionally provided from storage to client side via communication means, thereby to allow a priorly transmitted segmental image document to be

combined with an additionally transmitted segmental image document for constitution of an image of moved display domain.

11. The apparatus as defined in claim 9, wherein
5 segmental image documents created by dividing the sequentially reducibly created image documents are respectively of the same size at all levels.

12. The apparatus as defined in claim 10, wherein
10 segmental image documents created by dividing the sequentially reducibly created image documents are respectively of the same size at all levels.

13. The apparatus as defined in claim 9, wherein the
15 original digital image documents and reduced image documents (Level = 1 ~ N) are provided as one group of image document style to be sequentially and alternatively displayed when a client views same.

20 14. The apparatus as defined in claim 10, wherein the original digital image documents and reduced image documents (Level = 1 ~ N) are provided as one group of image document style to be sequentially and alternatively displayed when a client views same.

25 15. The apparatus as defined in claim 9, wherein the original digital image documents and reduced image documents

(Level = 1 ~ N) are created by dividing the multiplicity of image documents obtained by panoramic photographing according to segmental image documents and then combining same mosaically.

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16. The apparatus as defined in claim 10, wherein the original digital image documents and reduced image documents (Level = 1 ~ N) are created by dividing the multiplicity of image documents obtained by panoramic photographing according to segmental image documents and then combining same mosaically.